

ABSTRACT OF THE DISCLOSURE

In a direct conversion receiver, to cancel a DC offset generated in the baseband processing block, negative
5 feedback arrangements comprising a gain control amplifier and a low-pass filter are respectively attached to the I and Q signal branches of the baseband block following mixer outputs. The gain control amplifier in each negative
10 feedback circuit is gain adjusted so that the product $G \cdot B$ of the gain G of a primary gain control amplifier and its own gain B will be constant and thereby the DC offset is cancelled. This DC offset cancellation can be applied in a continuous receiving system with no intermittent time during a receiving operation. Capacitance elements
15 located off-chip can be reduced to those to be used only in the low-pass filters in the negative feedback circuits, whereas many off-chip capacitance elements have been required to be inserted between each stage of gain control amplifiers in conventional baseband chains.